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Search Results -

Terms	Documents
((battery or cell) and electrode and electrolyte and (pore adj size) and (surface adj area))	6

Database: US Patents Full-Text Database; US Pre-Grant Publication Full-Text Database; JPO Abstracts Database; EPO Abstracts Database; Derwent World Patents Index; IBM Technical Disclosure Bulletins

Search: L4

Refine Search

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Search History

DATE: Sunday, June 02, 2002 Printable Copy Create Case

Set Name side by side	Query	Hit Count	Set Name result set
	DB=JPAB; PLUR=YES; OP=OR		
L4	((battery or cell) and electrode and electrolyte and (pore adj size) and (surface adj area))	6	L4
	DB=EPAB; PLUR=YES; OP=OR		
L3	((battery or cell) and electrode and electrolyte and (pore adj size) and (surface adj area))	0	L3
	DB=DWPI; PLUR=YES; OP=OR		
L2	((battery or cell) and electrode and electrolyte and (pore adj size) and (surface adj area))	8	L2
	DB=USPT; PLUR=YES; OP=OR		
L1	((battery or cell) and electrode and electrolyte and (pore adj size) and (surface adj area)).clm.	20	L1

END OF SEARCH HISTORY

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Search Results -

Terms	Documents
(lithium and battery and electrode and electrolyte).clm. and (molten adj salt).clm.	5

Database: US Patents Full-Text Database; US Pre-Grant Publication Full-Text Database; JPO Abstracts Database; EPO Abstracts Database; Derwent World Patents Index; IBM Technical Disclosure Bulletins

Search: L9

Refine Search

Recall Text | Clear

Search History

DATE: Sunday, June 02, 2002 Printable Copy Create Case

Set Name side by side	Query	Hit Count	Set Name result set
	DB=USPT; PLUR=YES; OP=OR		
L9	(lithium and battery and electrode and electrolyte).clm. and (molten adj salt).clm.	5	L9
L8	(battery and lithium and electrode).clm. and (particle adj size) and (aspect adj ratio)	14	L8
L7	(battery and lithium and electrode and (particle adj size)) and (aspect adj ratio)	53	L7
L6	L1 and (aspect adj ratio)	2	L6
L5	L2 and oxide.clm.	15	L5
L4	L2 and oxide	25	L4
L3	L and oxide2	5	L3
L2	L1 and intercalation	30	L2
L1	(battery and lithium and electrode and (particle adj size)).clm.	59	L1

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L2: Entry 3 of 8 File: DWPI Mar 28, 2001

DERWENT-ACC-NO: 2000-072371
DERWENT-WEEK: 200118

TITLE: Electrodes for primary or secondary electrochemical generator, e.g. lithium ion battery

INVENTOR: GRAETZEL, M; PAPPAS, N ; SUGNAUX, F R

PATENT-ASSIGNEE:

ASSIGNEE	CODE
ECOLE POLYTECHNIQUE FEDERALE LAUSANNE	ECOLN

PARENT

PRIORITY-DATA: 1998EP-0810431 (May 12, 1998)

PATENT-FAMILY:

PUB-NO	PUB-DATE	LANGUAGE	PAGES	MAIN-IPC
EP 1086506 A1	March 28, 2001	E	000	H01M010/40
WO 9959218 A1	November 18, 1999	E	029	H01M010/40

DESIGNATED-STATES: CH DE FR GB IE LI NL CN JP US AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE

APPLICATION-DATA:

PUB-NO	APPL-DATE	APPL-NO	DESCRIPTOR
EP 1086506A1	May 8, 1999	1999EP-0932452	
EP 1086506A1	May 8, 1999	1999WO-EP03261	
EP 1086506A1		WO 9959218	Based on
WO 9959218A1	May 8, 1999	1999WO-EP03261	

INT-CL (IPC): H01 M 4/48; H01 M 4/58; H01 M 10/40

ABSTRACTED-PUB-NO: WO 9959218A
BASIC-ABSTRACT:

NOVELTY - Mesoporous electrodes (1,2) having higher electric power density and higher ion exchange capacity are connected together by an electrolyte and are used in a primary or secondary electrochemical generator.

DETAILED DESCRIPTION - High capacity and high power density primary or secondary electrochemical generator has two mesoporous electrodes (1,2) that are connected together by an electrolyte. The electrodes are used to support different electroactive materials which can be oxides or chalcogenides of transition metals or their lithiated or partially lithiated forms like TiO2, Nb2O5, WO3, V2O5, MoO3, MnO2, LixMn2O4, HfO2, TiS2, WS2, TiSe2, LixNiO2, LixCoO2, Lix(NiCo)O2, Fe2O3, Fe3O4, RuOx, FexS2, RuxS2, MoS2, WS2, IrxO2, CexO2, LixNayMnOzIn, InxO3, TaxO5, SnMxOy or SnxO2 in mesoporous form having a pore size of 0.001-10 micron and a specific surface area of 2-2000 m2/g (n is less than 1 and M is one or more glass forming metallic elements).

USE - The electrodes are used as cathode or anode in a primary or secondary electrochemical generators.

ADVANTAGE - The electrodes provide a primary or secondary electrochemical generator having enhanced power and energy density. The electrodes also provide optimal performance and mechanical strength of the generator and improve local heat dissipation or exchange from the solid during high rate discharge, thus protecting the sensitive materials of the generator from degradation.

DESCRIPTION OF DRAWING(S) - The figure shows a side view of an electrochemical generator showing the arrangement of the internal layers.

Mesoporous electrodes 1,2

Separator layer 3

Current collectors 4,5

CHOSEN-DRAWING: Dwg.1/7

TITLE-TERMS: ELECTRODE PRIMARY SECONDARY ELECTROCHEMICAL GENERATOR LITHIUM ION BATTERY

DERWENT-CLASS: A85 E19 L03 X16

CPI-CODES: A12-E06A; E07-D09A; E10-A08C; E10-A09B8; E10-A10D; E10-A17B; E10-G02H1; E11-N; E31-K07; E31-L; E31-M; E31-Q06; E34-C03; E34-E; E35-F; E35-H; E35-K02; E35-K04; E35-L; E35-N; E35-Q; E35-S; E35-U02; E35-U05; E35-V; E35-W; E35-X; E35-Y; L03-E01B;

EPI-CODES: X16-A02A; X16-B01F1; X16-E01C1; X16-E01G; X16-J02; X16-J08;

CHEMICAL-CODES:

Chemical Indexing M3 *01*
Fragmentation Code
A426 A940 C108 C550 C730 C801 C802 C803 C804 C805
C807 M411 M424 M740 M781 M904 M905 Q010
Specfic Compounds
03239K 03239U
Registry Numbers
1508U

Chemical Indexing M3 *02*
Fragmentation Code
A672 A940 C108 C550 C730 C801 C802 C803 C804 C805
C807 M411 M424 M740 M781 M904 M905 Q010
Specfic Compounds
08630K 08630U

Chemical Indexing M3 *03*
Fragmentation Code
A426 A940 C108 C550 C730 C801 C802 C803 C804 C805
C807 M411 M424 M740 M781 M904 M905 M910 Q010
Specfic Compounds
01508K 01508U
Registry Numbers
1508U

Chemical Indexing M3 *04*
Fragmentation Code
A425 A940 C108 C550 C730 C801 C802 C803 C804 C805
C807 M411 M424 M740 M781 M904 M905 Q010
Specfic Compounds
01936K 01936U